

**REMARKS**

Applicants thank the Examiner for the thorough examination of the application. A Terminal Disclaimer is being filed concurrently with this paper. No new matter is believed to be added to the application by this Amendment.

**Status of the Claims**

Claims 1-15 are pending in the application. The claims have been amended to clarify that the compound (I) and its derivatives are in monomeric form. The claims have additionally been amended to improve their language.

**Election/Restriction (Paragraphs 1-5 of the Office Action)**

The Examiner is examining the claims of Group I (claims 1-14) on the merits. The Examiner has withdrawn the claim of Group II (claim 15) from consideration.

**Objection to the Abstract (Paragraph 6 of the Office Action)**

The Examiner objects to the Abstract as containing minor errors. A substitute Abstract has been provided that is free from minor errors.

**Objections to the Drawings (Paragraph 7 of the Office Action)**

The Examiner objects to the drawings as spelling the word "organoaluminium" spelled in the British manner. The proposed amendments to Figures 1 and 2 spell "organoaluminum" in the American manner.

The Examiner additionally objects to Figure 2 by using Y to symbolize something other than yttrium. However, Y in Figure 2 is clearly labeled to be a hydrocarbon group of C<sub>3</sub> or more. As a result, the meaning of Figure 2 is clear to a person having ordinary skill in the art. Additionally, the Applicant can be his own lexicographer.

**Double Patenting Rejection (Paragraphs 8 and 9 of the Office Action)**

The Examiner rejects claims 1-14 as being rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 and 11-15 of U.S. Patent No. 6,309,997. Applicants traverse.

A Terminal Disclaimer of U.S. Patent No. 6,309,997 is being filed concurrently with this paper. As a result, U.S. Patent No. 6,309,997 is removed as prior art. This rejection is accordingly overcome and withdrawal thereof is respectfully requested.

**Rejection Under 35 U.S.C. 112, Second Paragraph (Paragraph 10 of the Office Action)**

Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph as being indefinite. Applicants traverse.

The majority of the Examiner's suggestions have been incorporated into the claims. However, the Examiner asserts that "compound (A)" should be rewritten as "compound (I)". However, claim 1, lines 3-4 clearly state "(A) a transition metal compound represented by the following formula (I)." Thus, "(A)" clearly refers to a compound while "(I)" refers to a formula. As a result, "compound (A)" set forth in the claims is clear.

The amended claims are therefore clear, definite, and have full antecedent basis. This rejection is accordingly overcome and withdrawal thereof is respectfully requested.

**Rejection Under 35 U.S.C. 103(a) Over Johnson or Schulz in View of Jacobsen (Paragraphs 11-12 of the Office Action)**

Claims 1-14 are rejected under 35 U.S.C. 103(a) as being obvious over Johnson (US 2002/0082366 A1) or Schulz (GB 1390530) in view of Jacobsen (WO 96/28402). Applicants traverse.

Johnson was filed on February 27, 2002 and is a divisional of an application filed on March 22, 1999. However, the instant application claims priority of JP 109922/1997 (April 25, 1997), JP

111439/1997 (April 28, 1997), JP 132333/1997 (May 22, 1997), and JP 50541/1998 (March 3, 1998). All of the priority documents of the application antedate the priority date of Johnson.

Of the priority documents of the instant application, JP 109922/1997 and JP 50541/1998 are most relevant to the instant claims. As a result, translations of these priority documents will be filed in order to perfect priority of the claimed invention. Johnson is thus being removed as prior art.

Schulz pertains to organoaluminum catalysts. Schulz at column 2, lines 4-6 generally describes the organic part as "alkyl, cycloalkyl, alkenyl, cycloalkenyl, aryl, aralkyl or aralkenyl." Besides several examples given in column 2 of Schulz, the general description of the organic part of the catalyst is vague. Schulz is also silent on the compound of the transition metal of groups 3-7 and 11. Schulz merely discloses a Ni or Co compound that is used for an oligomerization catalyst.

The Examiner admits that neither Johnson nor Schulz discloses that the metal of the transition metal compound may be from the groups 3-7 or 11. The Examiner then alleges that Jacobsen contains these teachings so that they could be combined with Schulz or Johnson to suggest the present invention.

However, Jacobsen discloses tri- or tetra-dentate ligand systems (see page 5, lower formula, page 6, page 7). This type of ligand system is entirely different from the organic formula of the present invention. The upper formula on page 5 of Schulz shows a bi-dentate ligand system. However, this compound includes two ligands and is entirely different from the inventive catalyst that includes only one bi-dentate ligand.

The transition metal compound of Jacobsen thus has fundamental differences from the compound of the claimed invention. Also, catalyst chemistry is unforeseeable, and it is therefore improper to combine such dissimilar references to infer that the desired catalyst activity would be obtained. Thus, a person having ordinary skill in the art would have no motivation to combine the references to allege *prima facie* obviousness.

Further, even if the references were combinable, the combined teachings of the references would not produce the instantly claimed invention. That is, Jacobsen merely teaches that the central metal is a transition metal, generally groups 3-12, preferably 5-12. As such, Jacobsen does not specifically teach the selection of a transition metal of groups 3-7 and 11.

Thus the teachings of Jacobsen when combined with Schulz (or Johnson, if this reference had not been removed) would not motivate

a person having ordinary skill in the art to produce the invention sufficient to allege *prima facie* obviousness. This rejection is accordingly overcome and withdrawal thereof is respectfully requested.

#### **Information Disclosure Statements**

The Applicants respectfully request the Examiner to consider the Information Disclosure Statements filed August 31, 2001 and November 3, 2003 and to make the initialed PTO-1449 forms of record in the application in the next official action.

#### **Prior Art Cited by the Examiner**

The prior art cited but not utilized by the Examiner indicates that status of the conventional art that the invention supercedes. Additional remarks are accordingly not necessary.

#### **Foreign Priority**

The Examiner has acknowledged the claim for foreign priority.

#### **Conclusion**

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully

Amendment dated November 25, 2003  
Response to office Action of August 25, 2003

Appl. No. 09/942,706

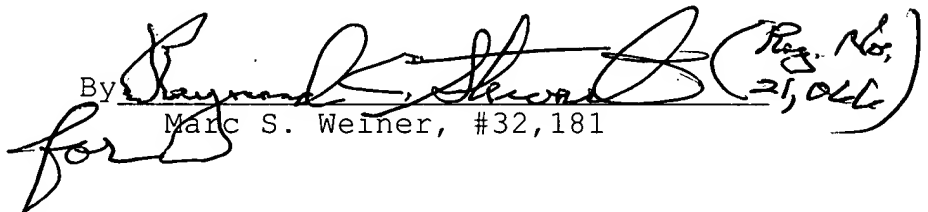
requested to contact Robert E. Goozner, Ph.D. (Reg. No. 42,593) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.


Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By

  
for

Marc S. Weiner, #32,181

  
MSW/REG:jls  
1155-0222P

P.O. Box 747  
Falls Church, VA 22040-0747  
(703) 205-8000

Attachment(s): Substitute Abstract

(Rev. 09/30/03)